Triple Site – City of Sunnyvale Project Update
Residential/School Indoor Air Sampling & Mitigation
Sunnyvale City Hall, West Conference Room
Thursday, November 12, 2015 | 4:30 – 5:30 p.m.

Meeting Attendees:

- Melanie Morash, EPA
- Alejandro Diaz, EPA
- Lynne Kilpatrick, City of Sunnyvale
- Jennifer Garnett, City of Sunnyvale
- John Stufflebean, City of Sunnyvale
- Cynthia Woo, CB&I
- Lawrence McGuire, Circlepoint
- Trudi Ryan, City of Sunnyvale
- Dana Koefoed, Circlepoint

I. Presentation by Melanie Morash

- Meeting goals:
    - Update City Officials about outreach efforts for the residential and school testing over the last year
    - Testing results
    - Look ahead to 2016
    - Opportunity to ask questions
    - Ensure that we are on the same page and check-in to see if there is more EPA can do to support the City of Sunnyvale on this issue
- How has the reception been with the parents?
    - In general, it has been positive and smooth.
    - One family decided to pull their child from the Rainbow Montessori School because of vapor intrusion.
    - Other than this one example, the process has been going very well. EPA has been proactive in sharing up-to-date information (in multiple languages) with parents and community members through letters, updates, and meetings at San Miguel Elementary.
- The results have also been good as well?
    - The majority of sampling results confirm that TCE concentrations inside buildings are below 2.0 ug/cubic meter, *i.e.*, concentrations that do not warrant mitigation measures.
    - As we sample more buildings, EPA has found some instances where TCE concentrations in the crawlspaces under homes warrant mitigation measures to ensure that unacceptable TCE concentrations do not reach living spaces.

- Results from the schools
    - EPA has sampled four schools in the neighborhood (San Miguel, Rainbow Montessori, Children's Creative Learning Center ("CCLC") Daycare, and The King's Academy).
    - At CCLC Daycare, no TCE was detected.
    - At Rainbow Montessori, some potential for vapor intrusion has been observed in non-ventilated conditions. The school is implementing an interim plan to protect students and teachers while permanent mitigation systems are being designed.
        - What is EPA doing in the interim? We have worked with the school administration's ventilation contractor, EPA's ventilation contractor, and Locus Technologies, a private consulting firm. We evaluated the ventilation systems in all of the school buildings and made a number of upgrades. We provided letters to the school for distribution to parents. After making improvements, some teachers were intentionally turning off the ventilation, which was circumventing our efforts. We prepared letters for the teachers to provide information about the ventilation system upgrades, and implemented additional controls on the ventilation systems to ensure adequate fresh air circulation through the buildings.
        - Monthly air samples indicate the ventilation systems in affected buildings are now maintaining adequate fresh air circulation. Indoor air samples are showing either no TCE or amounts that are too small to pose a health risk. Air testing was completed before and after school. While we conduct monthly air testing at Rainbow, a mitigation plan for each affected building is being prepared. As of this meeting date, EPA has not seen those plans.
    - Air samples at Kings Academy and San Miguel all fully met EPA requirements. A couple of classrooms and in particular the small portable classrooms showed slightly higher TCE levels than we would see outside. There is some vapor intrusion but not enough to pose a health risk. Another round of tests is being performed this coming winter and another round of letter updates will be sent. We have already sent initial information letters to all parents and school faculty at both schools.
        - Should other construction methods for new portables be required?
        - As a precaution, EPA recommends that any new building constructed over this plume has a pre-emptive vapor mitigation system or a vapor barrier. New systems are much easier and less costly to build than retrofitting existing ones.
        - As a precaution EPA recommends installing a mitigation system at the California Young World portable building at San Miguel Elementary. This building is used as an after-care center. EPA has found vapor intrusion in this part of the neighborhood. Of the 115 residences sampled in the area, 18 have shown potential effects of vapor intrusion. Several buildings located near the portable building have evidence of vapor intrusion above our action levels. We recommend mitigating the portable due to the close

proximity, even though concentrations in the portable building do not exceed EPA action levels.

- Results from the homes
    - We continue to work with property owners to obtain permission to conduct testing. We have completed four door-to-door outreach events and distributed several flyers in multiple languages.
    - There are 6 residences where vapor intrusion levels inside the home are acceptable, but high levels have been found underneath the building. This indicates a risk that higher concentrations may be found inside the living spaces of these residences in the future. EPA wants to be proactive and will take action where there is a reasonable probability of material risk.
    - Mitigation plans submitted in early November were reviewed by EPA and modifications have been requested. As of November 12, EPA has communicated this information and revised plans will be submitted to EPA. EPA is hopeful that the revised plans will be acceptable and/or need only minimum corrections.
    - Buildings with a crawlspace are more straightforward to mitigate because residents do not have to be relocated. A minimal type of mitigation system would include high-density polyethylene liner in the crawlspace where the utilities and piping underneath is sealed. This is a passive type of system where vapor is vented out, above the roof and diluted in the air. EPA prefers to see an active system with fans that depressurize the crawl space. EPA will likely accept a passive system that has an active element. EPA's preference would be to see samples from under the building with no TCE or similar concentration as outside air. EPA's acceptable risk range for TCE is 0.48 to 2.0 micrograms per cubic meter.
    - The highest TCE level that we have seen outdoor is 0.62 micrograms per cubic meter. In these cases we want to conduct additional sampling after the mitigation system is installed and then return to sample annually for a reasonable length of time before shutting off the system.
    - As currently planned, residents do not need to be relocated. However, crawlspace systems require someone to go underneath to install them. A resident/tenant survey should be conducted before work begins to recognize their needs. If the resident/tenant has a different schedule, such as a graveyard shift, they may have to be relocated. This is a very diverse neighborhood and poses a challenge as every building and home is different and you need to be sensitive to their needs.
    - One building on San Juan has seen slightly elevated levels. We have re-sampled this building and the levels have gone down. If EPA decides to do proactive vapor intrusion mitigation, the residents will need to relocate as the building is slab-on-grade. It would be challenging to live there while the work is being performed.
    - EPA will know if a system needs to be installed at this building in a few months. The challenge is to time sampling according to the weather. We want to get in at the coldest possible times. The colder it is the more likely people are heating their homes which creates a "stack effect", *i.e.*, where the building sucks in air from the

subsurface. If there is a vapor intrusion problem, it's worse in the winter months. EPA's goal is to sample about 100 homes in the next month or two.

- Property owners
    - Some are responsible and caring and they work cooperatively with us. There are other property owners that are not like that.
    - EPA has begun to embark down a path of engaging with some property owners that are not cooperating.
        - One category is the owner occupied home where the owner declines the testing.
        - The second category is where the tenants have requested testing and the owners are not cooperating (*i.e.*, actively refused or not responsive).
        - EPA recently sent letters to 3 to these owners. Two have multiple buildings. Some owners have refused access for testing and others have threatened eviction to tenants. The letters show the EPA authority to test these residences and the health risks associated with taking no action. The letter requires that property owners respond to EPA within five days, and then the EPA will submit an order. If they do not provide voluntarily access, the EPA will impose a fine of up to $35,000/day. We don't know the next step, beyond that as this action is setting a precedent. However, the EPA does not like to threaten anyone. We will have to see what happens and follow this process out. Our goal is to education property owners and hopefully their cooperation is voluntary.
        - People also have concerns about the drinking water which is not affected by this contamination. However, EPA has on numerous occasions advised people that their drinking water comes from the Hetch Hetchy Reservoir and is not impacted by any potential contaminants in the groundwater.
        - There is no precedence for this action?
        - No. For this reason, EPA wants to exhaust every effort to obtain access voluntarily. The EPA has authority under the CERCLA Section 104 (e) Administrative Order with penalty provisions. Whether we will do that or hand it over to the Department of Justice remains to be seen. We are proceeding with this level of action one-step at a time.
        - What are the barriers to property owners?
        - Different scenarios of what I have heard from property owners.
            - One told me that all he cares about is marketability. If the TCE levels are high, than the tenants will want to move out of the residence.
            - Others are concerned about potential liability and that they may be sued. The EPA explained that "responsible parties" have been identified (due to past commercial manufacturing activities nearby). Current property owners are considered to be "innocent landowners" so EPA would never go after them. Their

responsibility is to allow access for testing and remediation. They are not the responsible parties.
Another category involves 15 property owners where the tenants signed up for testing. In these cases, the property owners have not responded to EPA correspondence. For these nonresponsive property owners, EPA's Civil Investigators are trying to contact them and ensure that they received our letters. After this approach, we will follow-up with a letter sent via FedEx to these unresponsive owners.

- We continue to offer testing to the whole neighborhood. The last major mailing went to over 1,000 property owners and households in September.

- Do the tenants have grounds in Civil Law to sue the property owners who is not responsive to the EPA?
- Good question that I don't know the answer to it.

- Looking ahead
  - There is the issue of new development and permitting. EPA has been focused on sampling air with the cooperation of the responsible parties. Looking ahead, 2016 will be another big year for conducting indoor air sampling and door-to-door surveying. As we look ahead, we will need to work closely with the City regarding the implementation of any mitigation strategies for new development or renovations. EPA would want to work with the City on a set of procedures that address potential vapor intrusion.
  - The question of future permitting is a good one with regard to what EPA tracks about a particular property.
  - Given the information we now have about a given property, when the schools or a property owner in the area requests a permit, this information will be available.
  - EPA will want the City to require mitigation systems on new construction in these areas.
  - What is required for the transfer of sale?
  - We need to look into what we can do for these types of situations.
  - The Record of Decision we have addresses vapor intrusion but not ground water. Responsible parties are containing the plume and submitting a new plan to speed up ground water cleanup. On the Lowes property, they still have elevated TCE concentrations in the deeper ground water. Probably in 2017, EPA will be looking to amend the Record of Decision for this site and formally include a vapor intrusion remedy. It will include a focused meeting with the City to handle redevelopment issues. We will read and review it together.
  - The MEW site in Mountain View has implemented the Record of Decision, institution of controls, and the lessons learned. The City decided they did not want to adopt a zoning ordinance that governed new construction over the MEW.

- Mountain View created a city policy incorporating EPAs recommendations on new requirements over the plume. EPAs preference was that they pass a zoning ordinance. They put together a city policy for renovations and new construction over the plume.
- Every time we test, owners receive an official letter of what EPA found and the recommended next steps. This should be part of the owners' record.
- What is the program for properties that change hands? Are the responsible parties going to be responsible for a certain amount of time?
- We will need to have a conversation with the responsible parties about this question. The problem goes away when the contamination source is addressed. The goal is to work with the responsible parties to lower TCE levels. When it is an issue, they need to be responsible.
- Is this a superfund site?
- The Philips site is not currently listed as a superfund site. They are in a removal fund site but not listed on the NPL list of the worst sites. When we open up the record of decision, we will look at this correction.
- They have some ultimate responsibility for clean-up?
- At AMD and TRW, they have been working aggressively to remediate by injecting sugar to digest and clean up the TCE. This method has resulted in dramatic declines.
- The Philips method to pump and treat TCE contamination is not as effective. We see 10,000 micrograms per liter on the Lowes property.
- We need to improve the problem at the source.
- The responsibility rests with the original responsible parties. We drafted a *bonafide* responsibility letter to assuage this concern.
- There is no risk of coming into contact with contaminated water or soil. The only risk that we see is inside new buildings. As long as they build in the barriers, residents and those working in the area will be protected.